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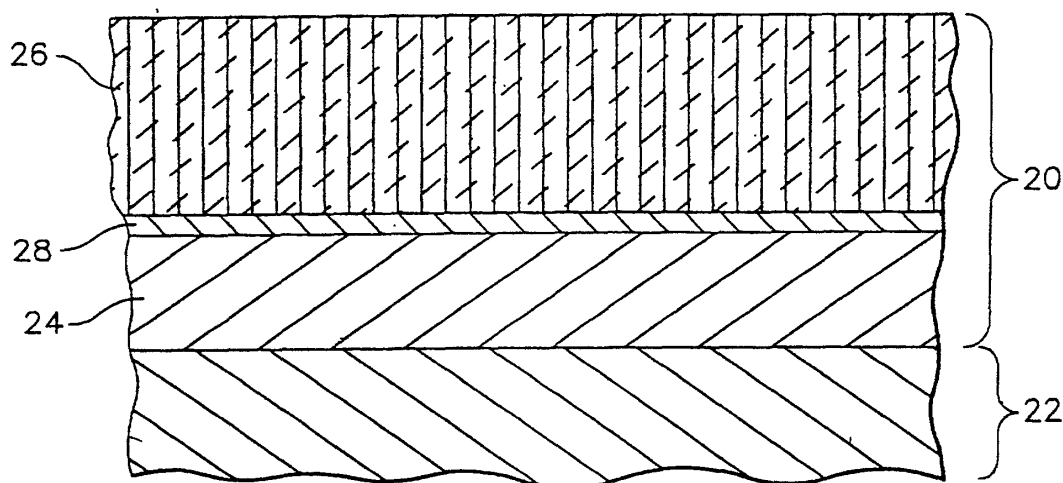
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(54) **Nickel aluminide coating systems**

(57) A coating system (20) for articles used in hostile thermal environments, such as turbine, combustor and augmentor components (10) of a gas turbine engine. The coating system (20) of this invention employs a Ni-Al-based intermetallic coating (24) containing 30 to 60 atomic percent aluminum so as to be predominantly of the  $\beta$ -NiAl phase, but also contains alloying additions

intended to increase the creep strength of the coating (24), and optionally contains alloying additions to getter impurities, increase fracture resistance, and promote oxidation resistance. For this purpose, the coating (24) preferably includes additions of chromium, titanium, tantalum, silicon, hafnium and/or gallium, and optionally contains additions of calcium, zirconium, yttrium,



**FIG. 2**



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# EUROPEAN SEARCH REPORT

Application Number  
EP 99 30 7219

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 30 October 2003	Examiner Haering, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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Application Number  
EP 99 30 7219

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 7219

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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